Internet Addiction, Self-esteem, Body self-relations, Narcissistic and Histrionic traits among Gen Z Adolescents across Gender and Educational Streams

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Synopsis for Pre- Thesis Submission

Sl.no	Topic	Page no
1	Introduction	1-24
2	Review of Literature	25-30
3	Method	31-36
4	Major Findings	37-40
5	References	41-46

Abstract

Internet as a tool is evolving into an essential part of everyday lives worldwide. Technological developments are always a double-edged sword. The internet has made our lives easier, but at the same time it has led to many people spending too much time in front of the computer, so much so that it has become the centre of our lives leading to a phenomenon of internet addiction. Research over the last two decades has indicated that problematic internet use is correlated with poor mental health and low quality of life and Since internet addiction is increasing at an alarming rate among the younger generation laying a significant impact on their mental health, it appears to be a major public health concern across the globe. The present research adopts ex-post facto design to study internet addiction, self-esteem, body self-relations, histrionic and narcissistic traits among gen Z adolescents across gender and educational streams. A purposive sample of 920 students (451 Male, 469 females) who use smart phones and internet regularly were assessed using Young's Internet addiction test (1998)Rosenberg self-esteem scale (1965), Cash's Multidimensional body self-relations scale(2000),Ferguson's Brief histrionic personality scale(2014) and Ames and Rose's Narcissistic personality Inventory-16(2006). Obtained data was analysed using SPSS 24. Data was assessed for normality using the Shapiro wilk test, as the obtained data did not meet the criteria of normality, non-parametric tests were used to analyse the data. Internet addiction across education streams was analyzed using Kruskal Wallis test, the results indicate there was significant difference in internet addiction across educational streams, with engineering and management students scoring higher in their level of internet addiction in comparison with general degree and Ayush students. Pairwise comparison was used to study the difference in the pattern of internet addiction, the results of the pairwise comparison indicate that engineering and management students scored higher in many patterns of internet addiction. Mann Whitney U test was employed to study the gender differences in internet

addiction; the results indicate that males had significantly higher levels of addiction compared to females. They tended to neglect their work and social life due to their addiction to internet. Spearman rank difference correlation was used to study the relationship between the variables; the findings suggest that self-esteem and internet addiction are negatively correlated. While histrionic and narcissistic traits are positively correlated with internet addiction. Of the ten areas of body image constructs, appearance orientation and overweight preoccupation are positively correlated with internet addiction, while fitness evaluation and body areas satisfaction are negatively correlated with internet addiction.

Keywords: gen Z, internet addiction, educational streams

Introduction

Adolescence

Adolescence is a period between puberty and adulthood. Adolescence is a period from 12-23 years of age and is characterized by "storm and stress". Adolescence is a turbulent time charged with conflict and mood swings. Adolescents' thoughts, feelings, and actions oscillate between conceit and humility, good intentions and temptation, happiness and sadness (Hall, 1904). An adolescent might be nasty to a peer one moment and kind the next moment; in need of privacy one moment but seconds later wants companionship. During this phase adolescents go through certain psychosocial changes /needs, one among them is the formation of one's own identity, which has been stressed in Erickson's 5th developmental stage that occurs during adolescence. Who am I? What am I? What am I going to do with my life? What is different about me? How can I make it on my own? These questions surface as a common, virtually universal concern during adolescence.

One of the important developmental tasks during adolescence is to solve the crisis of identity versus role confusion, as a part of this identity exploration an adolescent may experience a psychological moratorium, a gap between childhood security and adult autonomy. Though individuals become more introspective in adolescence, this self-identity is not internal; rather self-identity is more a social cognitive construction (Mc Adams et al., 2010). Identity is a self-portrait that is composed of many pieces like career identity, political identity, religious identity, relationship identity, intellectual identity, sexual identity, cultural identity, interests, personality and physical identity (Erickson (1968).

Adolescent's Psychosocial Task

According to Erickson, adolescents are experimenting with their identities on how they can relate to the world. Their development task mainly revolves around identifying, evaluating, and selecting roles as they make their transitions to adult life. In the process of achieving this developmental task, it is natural for adolescents to experience emotional turmoil and seem rebellious, as they are in search of their identity they may frequently tend to question or reject the previously held views (Hamman, 2005).

Erickson was clear that this phase of development is not an easy task, as it requires adolescents to have a blend of uniqueness and simultaneously provide a sense of unity or sameness. In the process of achieving uniqueness, adolescents must define themselves as distinct from their parents, peers and not just as a by-product of them. Another side for them is to maintain some continuity among the past, present, and future. Identity formation and evolution in adolescents are influenced by various external and internal factors that surround them like society, family, loved ones, ethnicity, race, culture, location, opportunities, Interests, appearance, self-expression, life experiences, and media.

Erickson's thoughts on the role of Technology in Individual Development.

The Ericksonian approach of individual development is difficult to study by separating it from the social and historical context (Sokol, 2009). Erickson (1963) noted that the development of technology at an ever-increasing pace is bound to impact healthy individual development in both positive and negative ways. He also noted that technology is playing a pivotal role in an adolescent's life in dealing with the task of identity development and role confusion.

Adolescents and Identity Seeking

Erickson's "Youth and American Identity" states that adolescents or youths are mainly concerned about the validation they receive for themselves and their behaviours by others. "That is how they appear to be in the eyes of others when compared with what they feel they are." Erickson further notes that people are more a part of the dense society, where people form a close relationship with each other, People are more concerned as to how they are viewed by others and are afraid that they should not get isolated from the group, hence even if an individual does not truly fit into the group of people deep in his values or heart, but still will act as he/she fits well with the group just to seem normal like others so that they will not be marked as strangers. Erickson further notes that this need for being a part of the group, at times temporarily leads individuals to over-identify to the point of apparent complete loss of identity with their heroes of cliques and crowd (Thall, 2018). Erikson (1985) proposed the term "Pseudo speciation" to describe the tendency of human beings- as a species- to differentiate themselves from other members of their species, "to feel they are of some special kind (tribe or nation, class or caste, family, occupation or type) whose crest they will wear with pride and conviction and defend against any inimical and not-so-human –kinds"

Gen Z Adolescents

In recent years generations have been given labels by popular culture, the most recent label is generation- Z, also known as the "iGeneration" or "Post Millennial" is a demographic cohort after the Millennials. Demographers and researchers typically use the mid-1990's as the starting birth years of Gen Z (Matthee, 2018). A significant part of this generation is the widespread usage of the internet from a young age; members of generation Z are typically thought of as being comfortable with technology and interacting on social media websites for a significant portion of their socializing. Researchers have used different names to address this generation, Oblinger and Oblinger (2005) call this group Post- Millenials, Prensky(2001)

addresses them with names like " Facebook generation", " Digital Natives" Some other names for this generation are "Dotcom kids", and "Net Generation".

Ethnic diversity and connection to technology are the two major characteristics in adolescents that make them stand out from the rest. It is important to emphasize that generation Z is the first global generation in the world as some call them as "Homo Globalis" indicating their unique position as the first people of a new evolutionary phase of humankind (Matthee, 2018). Adolescents of this generation are more open-minded and liberal than their counterparts concerning ethnic diversity, they seem to be growing up using the same culture, mostly like the same food, fashion, and places, and globalisation appears in their language as well (The Pew Research Center, 2019).

Another major thing that characterizes generation Z is their dramatic use of social media and technology. They are history's first "always connected" generation. Steeped in digital technology and social media, they treat their multi-tasking hand-held gadgets almost like a body part for better or worse. More than 8-in-10 say they sleep with a cell phone glowing by the bed, poised to disgorge texts, phone calls, e-mails, songs, news, videos, games, and wake-up jingles. Internet has become an integral part of adolescent life at an astonishing rate. Over the years, the primary purpose of the internet has drastically changed; the internet that was used by adolescents for infotainment is now switched to interpersonal communication. Technology is a boon no doubt, but where can we in our digital lives, draw the line between convenience and addiction? Gen Z adolescents have been characterized as particularly vulnerable and at high risk for developing internet addiction.

The virtual Social World for Adolescents

Adolescents today are majorly using the internet as a tool to craft their public personas and build social connections. The advancement in internet technology has paved the

way to transform identities in new ways. Social media specifically has provided ample opportunities to showcase one's physical identity and thereby create a virtual identity and identify themselves to the part of a group as Erickson rightly pointed out when he mentioned adolescents are today more prone to look for validation from others. The virtual identity they attain online allows one to present the best selves and withhold aspects of oneself that one is not confident about. In a recent poll carried out by the digital Information World (2021) members of Gen Z tend to be very conscious about their online persona, and consider their online persona to be more important than the real one. 60% of the Gen Z adolescents consider improving their online image as a high priority task. Hence it is evident that the members of gen Z ignore the real world and favour the virtual world and find it a safe place to experiment with their identities and are more motivated to present themselves in the virtual world.

In the process of forming their identities in the virtual world, adolescents would like to present themselves to others for validation under various circumstances. Self-presentation would be the end product of the process of identity formation. Self-Presentation is a concept given by social psychologist Goffman in 1956. Self-Presentation is seen as the behaviour of people to convey some information and image about themselves to other people. It includes any act that has an impact on other people. It covers a wide range of practices from how one dresses, the way the car is driven, to hiding fears so that other people know that they are comfortable. Baumeister (1982) states that there are two types of Self - Presentation, one is "Pleasing the audience" which emphasizes matching one's self-presentation to the audience's expectations and preferences. This expression of audience-pleasing motives is situational; as each audience is unique one presents one's self differently while catering to each audience. The audience-pleasing type of self-presentation can at times be inconsistent or contradictory to one's own identity, as the intention is to win the audience. The second type of self -presentation is the "Self-construction" type, this type of presentation

aims to match one's self-presentation to one's ideal self. Generally, this type of self-construction motive is supposed to be a stable disposition that is essentially consistent across situations and audiences. Further Hogan (1982) also put forth his views on self-presentation wherein he stated that Self-presentation is structured both by the immediate peer group and by the larger society which comprises the internalized reference group. He further points out that Self-presentation at times can be defensive which may intend to deny or contradict some image of self rather than claiming it, Hogan thinks that over a while the whole process of self -presentation becomes habituation as it tends to become automatic and unconscious.

In recent years social media environments have emerged as a new medium for self-presentation (Baumeister &Bushman,2014). Researchers are also of the opinion that the internet provides its users ample opportunities to experiment with their identities. Identity experiments and self-presentation strategies are the most significant aspects of adolescence; Adolescents are continuously seeking to explore their compartmentalized identities into integrated selves. Gen Z who are said to be the digital natives is believed to have an upper hand in understanding technology. Their lives revolve around the virtual world and they are more prone to these Identity experiments and the self-presentation race to seek virtual validation at a larger pace than any other generations in the past.

Internet Addiction: An overview

Technology has been an inseparable part of various aspects of our lives. Human dependency on this technology is apparent. Internet as a tool is evolving into an essential part of everyday life all over the world (Nalwa,2003). It is mostly popular among the younger generation across the globe, there is no doubt in saying that the internet has made human lives easier as it serves many purposes like easy communication with people across cultures, for education, entertainment, gaming, social networking. It can be said that the internet is one

of the major feats of human endeavor as it enables instant and almost free transmission of data; it holds the power to connect, educate and entertain (Krisen,2013)

According to the telecom regulatory authority of India, the total number of internet users in the country has risen from 795.18 million at the end of December 2020 to 825.30 million at the end of March 2021, registering a quarterly growth of 3.79 percent (TRAI, 2021). Technological developments are always a double-edged sword and the same is with the internet. That which can be used for good and the bad and mostly both at the same time (Kresin,2013). The appealing and advanced features of the internet have invariably improved human lives and engagement while arguably complicating individuals' control over this technology. On the one hand, if the internet has made our lives easier, it has also led to a lot of people spending too much time in front of the computer, so much so that it becomes the Centre of our lives, This phenomenon can lead to internet addiction (American addictions center Resource, 2018) Internet addiction is characterized by excessive or poorly controlled preoccupations, urges, or behaviours regarding computer use and internet access that lead to impairment or distress. The concept of internet addiction was first introduced in the year 1995 by Goldberg (Wallis, 1997). and later in 1997 he used a new term or redefined the term Internet addiction to " Pathological Internet –use disorder" since he believed that Internet addiction disorder sounded more like dealing with some substance abuse and that it was not necessary to fit every behavior under psychiatric nomenclature.

Theories of Internet addiction

I-Pace Model: Interaction of Person-Affect-Cognition-Execution.

This I-PACE model is a theoretical framework that examines the interactions between factors that predispose, mediate and moderate the symptoms of internet addiction, besides that it also explains the role of impaired executive functioning and decision making as an explanation to internet addiction.

Uses and Gratification Theory

This theory was proposed by Eliher Katzin 1959 in contrast to the Magic Bullet theory that stated that audience is the passive consumer of media, this theory being audience centric states that audience uses media to satisfy their own need and gets satisfaction once the needs are fulfilled. The needs here could be cognitive, affective, personal integrative, social integrative and tension free needs (Ruggiero, 2000).

Neurobiological correlates of internet addiction.

The neurobiological correlates of internet addiction suggest that impairment in the structural and functional aspects of the orbitofrontal cortex, dorsolateral prefrontal cortex lead to internet addiction**,** the same regions are associated with various cognitive controls like rewards, motivation and memory. Recent findings suggest that the differences in the biological and structural correlates in these areas are also found in other substance addiction disorders (Koob& Le Moal, 2008)

Neuro imaging studies suggest that reduction in grey matter in the orbitofrontal cortex in adolescents who are addicted to internet, it can be assumed that these changes in the brain reduce the inhibitory controls in individuals with addiction (Brand, Young & Laier, 2014).

Cognitive Behavioural Mechanisms of Internet gaming Disorder

Cognitive-behavioral paradigm emphasises three domains and their functions in addictive behaviours. Motivational drives, such as reward-seeking and stress-reduction, behavioural control, such as executive inhibition, and decision-making, which involves balancing the benefits and drawbacks of engaging in motivated activities, are among the three domains.

Searching for immediate reward despite long term negative consequence plays a central role in Internet Gaming Disorder (Dong & Potenza, 2014).

Theoretical Framework for the Research

Grant and Osanloo (2014) stated that a theoretical framework is an important aspect of the research process as it explains the application of theory in research thereby providing a strong academic standard and scholastic function. The presence of an adequately defined theory-based approach within the research gives the research a well–defined and proven basis for argument. It also gives the researcher broader guidelines and a general set of ideas within which the research study can fit in.

The present study adopts two main theoretical frameworks first is the Erickson's theory of psychosocial development emphasizing the development stage for adolescence where the development task focuses on identity versus role confusion. Erving Goffman's self- presentation theory is used to elaborate the theoretical framework of the present study as identity experiments and self-presentational strategies are most significant during adolescence.

Erickson's Identity theory.

Erickson believed that our personality is not governed by our innate biological factors, rather he emphasized that cultural and historical forces play an influential role in our personality, Erickson further divided the growth of the personality into eight psychosocial stages, where he highlighted the role of psychosocial correlates that shape our personality. Of the eight stages, the 5^{th} stage is focused on personality development during adolescence.

Erickson stated that the ages between 12-18 are the most crucial period for meeting and resolving the crisis of our basic ego identity. This is the period where an individual forms a self-image that is an integration of the ideas of oneself and what others think or perceive about us. Erickson also states that identity is a self-portrait that is made up of different

components, like the vocational, intellectual, political, religious, relationship, interest, and personality, sexual, cultural, and physical identities. In this research, the researcher tries to study identity in terms of personality by assessing self–esteem, histrionic and narcissistic traits, and physical identity by assessing body image with internet addiction.

The developmental task Erickson mentioned for this stage is to develop a healthy identity versus role confusion or identity crisis. Shaping and developing a healthy identity and accepting it is a challenging task, to achieve this developmental task adolescents tend to engage in a lot of identity experiments trying out different roles and ideologies, to see what best fits them.

In the process of trying out these experiments in this stage, some adolescents develop a strong sense of identity as they make their transition to adulthood, while those who fail to achieve this identity experience a phenomenon that Erickson called as "Identity Crisis" a state where an individual is confused about his role as to who they are, what they want to be, or where they want to go. Erickson noted a strong impact of peer group and the psychosocial factors on the development of ego identity. Further Erickson (1963) noted the influence of technology in developing ego identity. There is growing evidence that most adolescents use the internet more specifically social media to experiment with their identities (Calvert, 2002) However, there is not much research on how and why adolescents engage in internet-based identity experiments irrespective of gender.

The present research is undertaken to study the relationship between internet addiction and personality variables specifically among Gen Z adolescents, as the concept of Pseudo speciation given by Erickson highlights that there is a tendency among humans to differentiate themselves from other members of their species, “to feel they are of some special kind. Members of gen Z being the digital natives may associate themselves more

closely to the internet than any other generation; hence studying this phenomenon among this generation can give us better insights into understanding gen Z.

Goffman's Self-presentation Theory

The self and its identities participate in social life through self-presentations. Self-Presentation is a behaviour that attempts to convey some information about oneself or some image of oneself to other people. Other people here mean the social world. This process takes place both consciously and unconsciously and is usually motivated by the desire to impress others or to meet the needs of self (Goff man, 1959).

The concept of Self -Presentation emerged from the symbolic interactionist (SI) tradition. Symbolic interactionism is a unique sociological contribution to the field of social psychology that attends to the processes by which individuals create and interact with the world around them. Symbolic interactionism states that it is through the interaction and the development of shared meanings (symbolism) that individuals navigate the social world. The works of Erving Goffman specifically "The presentation of Self in Everyday Life" (1959) highlight the symbolic interactionist tradition.

Baumeister (1982) distinguished between two kinds of Self-presentational Motivations. One is the pleasing the audience type, where the focus is to match one's self-presentation to the audience's expectations and preferences. The other is self-construction where the focus is to match one's self-presentation to one's ideal self.

The major principle behind self-presentations is to create an impression on the audience either to influence or manipulate the audience for the self-benefit. In present times, the social interaction among adolescents is largely online communication as certain features of online communication such as reduced nonverbal cues, control over time and pace of interaction, anonymity offers adolescents unique opportunities to experiment with their identity as well as self-presentation. On the other hand, Adolescents also tailor their self -

presentation when they are online. Bortee(2005) states that social media sites provide greater freedom to adolescents to structure their self-presentation thereby allowing adolescents to have more control over the impression they make on others., This serves as an important motivational factor for adolescents to connect to social media platforms. Hence continuing with the theoretical frame of Erickson's identity theory, Erving Goffman's self-presentation theory can be useful in understanding Internet addiction among Gen Z adolescents.

The current research employs two major theoretical frameworks. The first is Erickson's psychosocial development theory, which emphasises the adolescent development stage, with the development task focusing on identity versus role confusion. The Self-Presentation theory of Erving Goffman is utilised to understand internet addiction. Because the study is aimed at adolescents, and one of the developmental tasks of adolescence is to establish one's identity, and in recent years, the process of establishing identity has occurred more frequently in the virtual world than in the real world, as the virtual world provides ample opportunities for adolescents to experiment with their identities, the Self-presentation theory has been used to better understand the phenomenon of internet addiction

Definition and Classification of Internet addiction

The concept and phenomenon of internet addiction are debated among many researchers. Some investigators have linked internet addiction to addictive disorders, grouping it alongside alcohol and drug use disorders (Griffiths,1999). While others have linked internet addiction to Obsessive-Compulsive disorder (Sussman,2005). or impulse control disorders (Shapira et al., 2000, Young 1998). The many names were given to this phenomenon recognize the various ways in which it has been regarded

- Compulsive computer use (Black, et al., 1999).
- Pathological Internet use (Davis, 2001).
- Problematic Internet use (Caplan, 2003).

- Internet dependency (Schere, 1997) and
- Internet addiction (Goldberg, 1996).

Young (1998) has proposed criteria patterned after the DSM-IV-TR criteria for pathological gambling. In employing her criteria, only non-essential computer/Internet usage (e.g. nonbusiness or non-academic use) is considered. She further breaks 'Internet addiction' into five subtypes and suggests that people typically become addicted to a particular application that acts as a trigger for excessive internet use.

(Young et al., 2000) stated that Internet addiction is a broad term covering a wide variety of behaviours and impulse control problems. The five subtypes of Internet addiction are as follows:

1- *Cybersex addiction*- This occurs in individuals who are typically engaged in viewing downloading and trading online pornography or are involved in adult fantasy role-play chat rooms.

2- *Cyber*- relationship addiction- Addiction to social networking, chat rooms, and messaging to the point where virtual, online friends become more important than a real-life relationship with family and friends.

3- *Net Compulsions*- This subtype includes a broad category of behaviours, including online gambling, shopping, or stock trading.

4-*Information Overload*- The World Wide Web has created a new kind of Compulsive behaviour that involves excessive web surfing and database searches. These individuals spend a disproportionate amount of time searching for, collecting, and organizing information.

5- *Computer addiction*- Most computers come equipped with pre-programmed games and people become addicted to playing them at the cost of work performance or family obligations.

Factors of Internet Addiction

Many studies have been conducted in the past to identify the factors associated with Internet addiction. In a general way personal, family, and school-related, characteristics of the internet and environmental variables are some of the contributors to internet addiction. Few studies have focused on the psychological risk factors like depression, aggression, emotional impulsivity, and self-esteem. While a few studies have emphasized the role of interpersonal variables like family environment, Parental monitoring, conflicts, peer pressure. Hur, Durkee, and Ju (2006, 2012& 2011) have stated that very few studies have tried to examine the social and large environmental factors that contribute to internet addiction.

Understanding any health problem by taking into consideration the individual, the environment, and the social factors gives a better insight into the problem. This design is very well reflected in the public health model. This model was originally designed as a model in the understanding of the infectious disease, this model emphasizes on three aspects that play an integral role in understanding the epidemiology and interventions needed with any health concern. The three factors are the External agent: Which contains a certain destructive potential, the second being the Host: which is the individual, and the Third the environment that promotes or enhances health-related behavior.

Applying the model to internet addiction, the model focuses on the importance of the *Host* (Individual characteristics) which could comprise of individuals personality, age, gender, in short, the aspects of one's identity. Individuals keen on making one's self - presentation consider the internet as a means to achieve it.

Agent (characteristics of the Internet), the reinforcing nature of certain applications, the internet works on the principle of variable ratio reinforcement schedule is presenting rewards. The various applications on the internet support unpredictable reward structures. *Environment* (i.e., social influence and accessibility) Peer group influence, advertisements of internet games, easy accessibility of internet connection could act as determinants of internet addiction, Many pieces of research in the past highlight the fact that internet addiction is higher among engineering students due to their constant exposure to the wired world.

Adolescence is a stage when adolescents are coping through certain developmental effects, which may trigger symptoms like mood swings, anxiety, emotional crises, depressive behaviors, which they may try to cope with using defense mechanisms like withdrawal, showing aggressive behaviors, or being too receptive to addictive behaviors. As adolescents today are quite comfortable with the use of technology, they are more vulnerable to using the internet as a mechanism to escape from their problems, which can over time lead to addiction.

Internet Addiction among Gen Z Adolescents

Internet addiction has undoubtedly become a major global concern across all classes, gender, and ages. Furthermore, internet addiction is studied across ages starting from teens to adults; most researches state that young people or adolescents are more vulnerable to addiction for varied reasons. Members of gen Z have a "digital bond with the Internet" and they use the internet to escape from the emotional and mental struggle they face offline. (Turner, 2013). As per the recent report by 99 firms in Jan 2022 on gen Z statistics, it is found that Gen Z-ers spend 8+ hours a day online, 74% of Gen Z-ers spend their free time online,73% of Gen-Zers use their internet connected devices primarily for chatting and texting, 85% of the gen Zers use social media to know about a new product, 45% of the Gen Z-ers follows more than 10 influencers on social media,71% of the gen Z-ers watch online

videos for more than 3 hours a day,75% of the genZ-ers don't consider college the only path to strong education, social media influences 57% of the genZ-ers. All these numbers indicate the fact that genZ-ers rely on the Internet for most aspects of their life and use the internet for education, information, entertainment, and forming role models, besides this their intense urge to form their identity, or an obsession to form a specific self-presentation to boost their self-esteem or to overcome their low self-esteem, as a way that encourages escape mechanisms from their problems, or could it be a personality trait like narcissism or histrionic traits that seek for constant validation from the virtual world. All these facts and figures direct that the gen Z-ers are constantly interested to be in trend in the public eye. Constantly updating their lives on social media makes this generation a self- conscious generation. Undoubtedly this excessive use of the internet for varied reasons has become one of the leading challenges in modern society and its impact on the members of gen Z is remarkable.

Internet addiction and Personality

Internet addiction has been studied with a wide range of psychological attributes. Personality traits correlated with Internet addiction have been widely studied in adolescents and young adults (Floros & Simios, 2014). Personality traits like neuroticism, emotional reactivity, self-esteem, psychoticism, novelty seeking have been studied by researchers in the past. Eysenck (1997) suggested that personality traits contribute greatly to vulnerability to all kinds of addiction. Researches in the past suggest positive correlations between internet addiction and personality trait dimensions of neuroticism (Yao et al., 2014) narcissism and self-esteem Andreassen (2016) Psychoticism (Ying et al., 2015), low conscientiousness has been studied. Personality can be one of the potential variables in understanding the development and maintenance of behavioral addictions (Andreassen et al., 2013). In recent years personality traits like narcissism, histrionic, and self-esteem are frequently studied with internet addiction. It is believed that the advent of new media and advances in social

networking sites have given rise to tendencies like narcissism, as these platforms are more frequently used by individuals with narcissistic tendencies to feed their egos. Andressen(2013) opines that these social media platforms may promote individuals to engage in ego-enhancing activities like sharing stories, pictures, and videos which in turn will enable them to enhance their egos which they receive through instant feedback and likes from a wide audience.

Internet addiction and Trait Narcissism

Trait narcissism is considered as a dimension of personality that consists of a grandiose self-concept as well as behaviors intended to maintain this self-concept in the face of reality. (Emmons,1984). However we need to understand that trait narcissism unlike narcissistic personality disorder which is generally found in the pathological population, exists in non-pathological populations, it's a personality trait, rather than a disorder. Narcissist is a term used for individuals who score high on the narcissistic personality inventory.

Two subtypes of trait narcissism were first made by Wink(1991) The Grandiose type and the Vulnerable type. Though the two types share most of the most characteristics of narcissism like self -centeredness, an exaggerated sense of self-importance, disagreeableness, and the tendency to interact with others in an antagonistic manner, each sub-type is unique in its dimension. Individuals with high vulnerable narcissism are said to be avoidant, insecure, hypersensitive, and vigilant for criticism (Wink, 1991; Miller et al., 2011). Besides this they are also constantly seeking admiration to feed their egos, they tend to have low self-esteem hence constantly seeking validation (Miller et al., 2011)

Grandiose narcissism on the other hand is characterized by high self-esteem, dominance in interpersonal relations, and an inflated sense of one's potential (Wink,1991, Pincua et al.,2009, miller et al., 2011).Individuals with this type of narcissism have an

exaggerated self-belief, they ignore or suppress any information that may be inconsistent with their inflated self-image (Campbell &Foster, 2007).

In recent times a lot of emphases is laid to study the relationship between narcissism and internet addiction as the world of the internet provides an ideal platform through these social media sites to achieve their narcissistic goals. It must be noted that the features of the present social media platforms offer various avenues for narcissists to display grandiosity and receive the desired attention(Barry & McDougall,2018) It provides greater control over self-presentation enabling the users to display an ideal construct that they wish to present.(Morf & Rhodewalt,2001)

Various attributes of SNSs make them seem an ideal tool for displaying grandiosity and receiving desired attention (Barry & McDougall, 2018). First, SNSs provide greater control over self-presentation, compared to face-to-face interactions, rendering them a useful venue for the development of strategic interpersonal behaviors, many of which are used by narcissists to construct and maintain a carefully considered self-image. Morf & Rhodewalt (2001). The second is the constant availability of platforms anytime and anywhere, the third allows narcissistic individuals to share their success to the virtual world easily and instantly and also receive instant feedback through likes and comments which are highly valued by Narcissists.

Internet Addiction and Histrionic Traits

Individuals with histrionic personality traits tend to show patterns of seductiveness, emotional shallowness and dramatics (APA, 2013) individuals with this trait are of the opinion that other people may not appreciate them if they weren't the centre of attraction and hence in order to be happy they tend to attract the attention of other people (Beck & Beck, 1991). Individuals with histrionic traits tend to show an intense drive to be the focus of

attention and frequently display impulsive expressions of emotions; they seek lot of social media friends (Berryman, 2014).

Individuals who frequently used social media in order to create an impression on others displayed histrionic tendencies (Sorokowski et al., 2016; Renner et al., 2008). Similarly individuals who relied on social media to achieve emotion support were more prone to develop histrionic tendencies (Rosen et al., 2013).

Internet Addiction and Self-Esteem

Self-esteem also referred to as self-worth or self-image is the global evaluative dimension of self. As mentioned earlier personality traits to a certain extent predict internet addiction, and hence it is not unusual to associate these two variables. There have been studies in the past that bring the connection between the two variables and conclude that a strong relationship exists between internet addiction and self-esteem. (Blachino,2016), (Cannan,2013). Besides this studies were also conducted to see if self -esteem was one of the causal factors to get addicted to the internet, Few studies have found that adolescents with low self-esteem used the internet as an escape from reality as it facilitated them to present an ideal self-image of themselves, and also made them feel better about themselves. Hence there is a two way of looking at this relation whether too much time in the virtual world leads to low self-esteem or vice versa. Viewing another virtual world may lead to constant comparison and trigger doubt about one's worth and the quality of life one leads leading to severe mental health concerns.

Internet addiction and Body Image

Body image is an aspect of identity which determines how one feels or perceives one's physical self. It is a perception that one has of one's physical self and the thoughts and

feelings that result from that perception. These feelings can be positive, negative, or mixed; several factors contribute to this scheme that forms one's body image.

There are four aspects of body image

Perceptual Body Image: It is the way an individual perceives one's body, it may not be a correct representation.

Affective Body Image: This is the way how an individual feels about one's body, it is related to the amount of satisfaction and dissatisfaction about one's body.

Cognitive Body Image: This represents how an individual thinks about one's body, this can lead to one's preoccupation with body shape or weight.

Behavioural Body image: This represents the behaviours in which you engage as a result of your body image.

The impact of social media on mental health has been in debate, and in recent times after the popularity of social media networks among adolescents has led to a serious concern leading to unrealistic standards among teenagers regarding their bodies. An article published in the Wall Street Journal in the September issue shared the findings of the facebook internal study that reported 32 percent of teenage girls felt bad about their bodies, and Instagram made them feel worse.

Studies in the past have explored the relationship between internet addiction and body image concerns, the findings of the study revealed that internet addiction was found to be associated with body image avoidance irrespective of gender (Rodgers et al.,2013).Studies have also reported that intense forms of appearance conversations that occur in social networks act as predictors of poor body image (Tiggemann &Clark, 2006).

Gender and Internet addiction

The Gender differences in internet addiction have been studied in the past. An analysis of the research carried out between 2012 to 2019 has found that the male gender is more prone to internet addiction than females (Durkee et al, 2012, Ostovar et al, 2016, Anderson et al, 2017,Limalemla, 2019) On the contrary Ono and Zavodny (2003) have analyzed the studies that were carried out between 1997-2001, which indicate that women spend more time online compare to their counterparts. Several factors determine gender differences in internet use Canary and Dindia(1998) identified factors like social aggressiveness, expressiveness, and structure of friendship, while Halpren(1996) related certain cognitive differences between gender which can be seen with regard to internet addiction. Weiser (2000) suggests that varied gender differences emerged in preferences for specific internet applications. Findings suggest that gender differences were seen in the purpose of internet use, Males generally used the internet for purposes related to entertainment and leisure, whereas women use it primarily for interpersonal communication and educational assistance. Another study conducted by Mitr et al., (2005) on the usage of the web revealed prominent gender variations generally visited humor, sports pornographic sites more often than women did, while women most frequently and special interest sites A study on web usage (Mitra et al., 2005) revealed the gender variations in which men visited humor, sports, pornographic, and special interest sites more than women did, whereas women most frequently used education or academic sites than the men.

Another prominent factor of gender difference in internet addiction could be due to parental monitoring. Garcia et al (2019) state that overall less parental monitoring in adolescence is one of the contributing factors to a higher level of internet addiction among adolescents, even among adolescents, female adolescents undergo more parental monitoring

and internet restrictions than the boys do. Hence internet addiction is more seen in males than in females.

Interesting gender differences were reported by Vyjayanthi et al. (2014) who states that female adolescents scored high on using social networking sites while male adolescents outnumbered females in multi-load games. These findings support the earlier views that adolescents with social anxiety used interactive features compulsively to overcome the anxiety inherent indirect social interactions. Boys tend to seek games with themes of power, dominance, control, or violence. Which is often associated with low self-esteem and dissatisfaction in life, on the other hand, women sought close friendships and preferred anonymous communication in which they could hide their appearance. Virtual worlds and groups gave women a sense of belongingness and an ability to share their feelings and emotions in private and convenient ways (Swaminath, 2008)

Kimbrough et al. (2013) State that women connect more than men on mediated communication, as women prefer more text messaging, social media, and video calls. These findings indicate that there is a changing trend in internet use among the genders

Internet addiction across Education streams

So far we have focused on understanding the internal aspects of an individual that could promote internet addiction, but the nature of understanding internet addiction would be incomplete without understanding the external factors that could contribute to internet addiction. Peer pressure, family environment, and the education stream that one has opted for, could also facilitate internet addiction.

Disciplines differ in the number of computer requirements they need as a part of their curriculum. Disciplines like engineering, management, information technology may use computers and the internet as a normal part of their curriculum; Ellis et al. (2015) states that

students from these disciplines require frequent exposure to the internet as their basic education requirement. Hence a typical student who is from a discipline where the use of the internet becomes a necessity experiences less parental monitoring on the use of screen time, As per DSM V one of the environmental risk factors for internet abuse is the availability of internet connection., less parental monitoring, continuous availability of internet facility makes students from these disciplines inhabiting a highly wired environment to be more vulnerable to internet addiction compared to medical or general degree students Brenner(1997) noted that greater accessibility of the internet among college students may increase their risk of internet addiction.

Internet addiction in the Indian Scenario

There have been arguments that state that internet addiction is no threat to India as given that internet usage just stands above 7 %. (Vyjyanthi,2014). The following scenarios and the upcoming centers for behavioural addictions across India stand strong in proving the fact that internet addiction is rampant and making its way at the utmost speed.

Indian Institute of Technology Powai, Mumbai made a stern decision of imposing restrictions on internet use in hostels which was referred to as "Tripping the Web Fantastic" sounded very ironic for an institution that produced great professionals who contribute majorly to the world economy (Swaminathan,2008). this decision came as an aftereffect of the students' suicide, Growing attendance problems among students, and fear that the IITians will turn into unsocialized zombies due to their overindulgence in the virtual world. (Swaminath, 2008).

The initiation of the SHUT Clinic (Service for Healthy Use of Technology) in 2014 by the National Institute of mental health and neurosciences, Ever since its inception in 2014 the SHUT clinic is receiving individual clients addicted to taking Selfies, gaming, and

pornography. The major chunk of the clients taking services from SHUT clinic is for gaming addiction, excessive browsing, and porn addiction reports Manoj Sharma who heads the SHUT Clinic.

SHUT clinic is India's first centre that mainly focused to deal with technology-related mental health issues, post which in 2016 the All India Institute of Medical sciences started a Behavioural Addictions Clinic (BAC), Following similar models The Armed forces Medical college in Pune and a few other colleges in Lucknow and Kerala have started similar centers to cater to the clients with behavioural addictions (Mantri,2019).

Review of Literature

The review of literature assisted the researcher in understanding the nature of studies conducted in the area of internet addiction, the related variables studied alongside internet addiction and the sample that was studied. The review of literature also assisted the researcher in identifying gaps in the area of internet addiction research and, as a result, helped the researcher in framing a research question for the study.

Levels of Internet Addiction across educational streams

Kamate et al. (2019) conducted a cross-sectional study on Internet addiction among Engineering students in Belagavi city. Data was collected from 500 students of four different Engineering Colleges of Belagavi city using Young's IAT Questionnaire, the findings of the study revealed that 16.2% of the students had a moderate level of Internet addiction and 6.2% of the students had a severe level of internet addiction.

Christian et al. (2019) carried out a cross-sectional study to assess the prevalence of Internet addiction among college students across educational streams (Medicine, Arts, Commerce, Science, and Law) in Ahmedabad city, intending to assess the prevalence and patterns of Internet use. Data was collected from 465 students using Young's Internet Addiction Test. The findings of the study revealed that the overall internet addiction was 56.8% which included 17.4% moderate and 1.3% severe internet addicts.

Gender Differences in Internet Addiction

Contradictory results were found with regard to gender and internet addiction, while a few researchers argued that there is a gender difference with regard to internet addiction, few researchers reported that gender-related differences didn't exist in terms of internet addiction.

Gosh (2017) conducted a study to observe the prevalence of internet addiction, understand the pattern, and determine the association between psychopathology and internet addiction among health profession undergraduate students. The findings suggest that internet

addiction was associated with gender, computer ownership, and preferred time of internet use, login status, and mode of internet access ($P < 0.05$)

Kannan (2019) conducted a study on gender variation in the prevalence of internet addiction and the impact of internet addiction on reaction time and heart rate variability in medical college students. The cross-sectional study comprised 201 undergraduate medical students with an age range of 18-25 years. The subjects were classified into different groups based on their level of addiction using Young's 'Internet Addiction Test (IAT). The findings of the study revealed that 17.4% of the students were addicted to the internet and that addiction was higher among males than females.

Khan et al. (2017) in a study conducted to determine the effect of gender and physical activity on internet addiction in medical students, Young Internet Addiction test was used to collect the data along with an interview schedule on physical activity.322 students responded to the study, the findings of the study suggest that internet addiction is unrelated to gender, but is inversely related to physical activity.

Another study conducted by Dufour et al. (2016) conducted a study on the gender difference in internet use and internet problems among Quebec High school students, also holds a similar view. The data was collected using the Internet Addiction Test developed by Young. 3938 students took part in the study, the findings suggest that there is no significant difference between the genders concerning Internet use; furthermore the study suggested that boys spent more time on the internet for online games, while females made intense use of the internet for using social networks.

Internet addiction and Self-esteem, and Personality Traits

Lynette (2016) conducted a study on the effect of mobile and internet addiction on self-esteem among adolescents. A total of 216 adolescents participated in the study. Internet Addiction Scale, Mobile Dependency Questionnaire, and Rosenberg Self-esteem scale were

used to obtain the data. The findings of the study indicate that there was a negative correlation between self-esteem and internet addiction as well as self-esteem and mobile addiction. A strong positive correlation was also noticed between mobile addiction and internet addiction

Budak (2015) conducted a study on the relationship between internet addiction, psychopathology, and self- esteem among university students. 185 students comprised the sample of the study. The findings of the study indicate that there is a significant relationship between internet addiction and self-esteem and that psychopathology and self-esteem must be taken into consideration as important parameters in the approach to internet addiction.

Andreassen (2016) conducted a large national survey to examine the associations between addictive use of social media, narcissism, and self-esteem. A cross-sectional convenient sample of 23,532 Norwegians completed an open web-based survey including the Bergen Social Media Addiction Scale (BSMAS), the Narcissistic Personality Inventory-16, and the Rosenberg Self-Esteem Scale. Results demonstrated that lower age, being a woman, not being in a relationship, being a student; lower education, having lower income, lower self-esteem, and narcissism was associated with higher scores on the BSMAS, explaining a total of 17.5% of the variance. The findings supported the notion of addictive social media use reflecting a need to feed the ego (i.e., narcissistic personality traits) and an attempt to inhibit a negative self-evaluation (i.e., self-esteem).

Savci (2019) carried out a study to test the hypothetical model that intended to examine the relationships between histrionic personality belief, narcissistic personality belief, need for social approval, and social media disorder. The study was carried out on 305 adolescents; findings demonstrated that histrionic personality belief positively affected the need for social approval and desire for being liked. The need for social approval and desire

for being liked positively affected social media addiction. Finally, social media addiction positively affected narcissistic personality belief.

Brailovskia (2020) studied the differences between late (born: 1991–2000) and early (born: 1977–1990) Millennials regarding the personality traits narcissism, sensation seeking, self-esteem, and Facebook use. They also investigated the relationship between personality traits and Facebook use, in both groups. Data were obtained from 254 Millennial Facebook users. Results of regression discontinuity analyses including age as covariate indicate that late Millennials on an average score significantly higher on narcissism, sensation seeking, self-presentation, and social interaction on Facebook than early Millennials. Both among Early and Late Millennials narcissism, sensation seeking, self-esteem, and online behavior were positively related. The findings of the study indicate that technological and cultural change affects the development of the early and late millennials differently.

Internet addiction and body image

Rodgers (2013) conducted a study to explore the association between Internet addiction symptoms, body image esteem, body image avoidance, and disordered eating. A sample of 392 French young adults completed an online questionnaire assessing time spent online, Internet addiction symptoms, disordered eating, and body image avoidance. Eleven percent of men and 9.7 percent of women reported Internet addiction. Body image avoidance was associated with Internet addiction symptoms among both genders. Controlling for body–mass index, Internet addiction symptoms, and body image avoidance were both significant predictors of disordered eating among women. The findings of the study support the self-presentational theory of Internet addiction and suggest that body image avoidance is an important factor.

Ryding (2020) carried out a systematic search to identify the social networking sites usage and patterns to study the mediating factors contributing towards body image

dissatisfaction. Forty studies were reviewed which met the inclusion criteria, findings suggest that Appearance-based comparisons were found to be a strong mediator between SNS use and body image dissatisfaction. Findings further suggested that frequent SNS usage can act as a potential risk factor in the development of Body Dysmorphic Disorder symptoms.

Need for the study

Internet addiction has undoubtedly become a major mental health concern particularly to the Gen Z population who rely on the internet for all major aspects of their life. Internet addiction affects various aspects of an individual's life, and each individual is influenced by it differently. The literature review helped in understanding that most of the researchers in the past have stopped at understanding the overall level of internet addiction, or have just studied the pattern of internet addiction in terms of (Mild, Moderate, and Severe levels of Internet addiction.). Present research tries to understand overall internet addiction, as well as the patterns of internet addiction like Salience, Excessive use, Lack of control, Neglect Work, Neglect Social Life, Anticipation as per Young's classification. Young (1998)

Research on gender differences in internet addiction has remained inconclusive with some studies by Durkee et al.(2012), Ostovar et al.(2016), Limalemla (2019), and Menon et al.(2018) Kannan(2019) reporting that males are addicted more to the internet, while cross-cultural studies conducted by Aylaz et al.(2015) report that females are addicted more to the internet than the males, yet some others like Weiser(2000), Nitu's (2017), Khan et al.(2017) and Dufour et al.(2016)report that there are no gender differences. Hence, this research is attempting to understand whether gender differences exist and in case it exists whether it is more among males or females.

The literature review also highlights the point that most studies on Internet addiction were carried out on college students in general, some have focused on engineering students. Research on internet addiction by Khan (2007) on possible factors affecting internet addiction

suggests that it would be better to understand Internet addiction among different educational levels. Research on Internet addiction and its relation to psychopathology and self-esteem among college students suggested that future studies can be implicated to analyze the results of the students according to different education streams (Mondal, 2018). Hence the present research tries to study the level and patterns of internet addiction among diverse education streams.

Studies have also found a link between personality and Internet addiction, but most of the available literature focuses on general personality traits, and few studies try to explore the relation between internet addiction and personality traits like narcissism and histrionics, which appear to have a significant impact on internet addiction. Furthermore, new media has played a significant influence on people's attitudes regarding their bodies. Though there are references in the literature that highlight the link between internet addiction and disordered eating. The influence of social media in shaping body perceptions, However, most of these researches are conducted on the western population and little is known about the relationship between body image and internet addiction with regard to the Indian population. Hence the present study tries to bridge these empirical gaps in the understanding of Internet addiction.

Method

Aim

To assess the level and pattern of internet addiction and study its relationship with self- esteem, body self-relations and histrionic and narcissistic traits among Gen Z adolescents across gender and educational streams.

Objectives

- To assess the level of internet addiction among Gen Z adolescents across educational Streams.
- To assess the pattern of internet addiction among Gen Z adolescents across educational Streams.
- To assess the gender differences in the level of internet addiction.
- To assess the gender differences in the pattern of internet addiction.
- To assess the relationship between internet addictions, self -esteem, body image, histrionic and narcissistic traits.

Hypotheses

H_{01}There is no difference in the level of internet addiction across educational Streams.

H_{02}There is no difference in the pattern of internet addiction across educational Streams

H_{03}There is no gender difference in the level of internet addiction.

H_{04} There is no gender difference in the pattern of Internet addiction

H_{05}There is no relationship between internet addiction and self-esteem.

H_{06}There is no relationship between internet addiction and body image

H_{07}There is no relationship between internet addiction and narcissistic traits.

H_{08}There is no relationship between internet addiction and histrionic traits.

Operational Definitions

Internet addiction

Internet addiction refers to the use of the internet excessively. In this research, it is assessed by the score obtained by the participants on the Young Internet Addiction Test.

Educational Streams

In this research educational streams refers to Engineering, Management, AYUSH, and General Degree Courses.

AYUSH

AYUSH is the acronym of the medical systems practised in India, such as Ayurveda, Yoga & Naturopathy, Unani, Siddha and Homeopathy. In this research students pursuing Naturopathy, Homeopathy and Ayurvedic streams have been included.

Gender

In this research gender refers to the gender binary of Male and Female.

Independent Variables

- Educational streams
- Gender

Dependent Variables

- Internet Addiction
- Self-esteem
- Body Self-Relations
- Histrionic Personality Traits
- Narcissistic Personality Traits

Research Design

The Study is ex-post- in nature.

Sample

The participants were male and female Gen Z adolescent students from across educational streams from Dakshina Kannada Region, Karnataka. Slovin sample size calculator determined 782 as the sample size, based on the survey report of undergraduate students carried out by statista.com. Data was collected from 950 students but, due to incomplete answering of certain tools by the participants, some data could not be considered for the final analysis and the final sample size was 920.

Table 1

Composition of the sample

Streams	Total participants	Male	Female
Management	250	132	118
General Degree	200	92	108
Engineering	244	120	124
Ayush courses	226	107	119
Total	920	451	469

Inclusion criteria

- Gen Z adolescents between 18 and 21 years of age.
- Gen Z Adolescents who possess a smartphone
- Gen Z adolescents who use the Internet, and Social media Apps

Tools Used.

Table 2

Tools used for collecting the Data.

Sl.no	Name of the Tool	Author	Year of tool development	Psychometric Property
1.	Internet Addiction Test	Kimberly Young	1998	0.85 test-retest reliability
2.	Multi-dimensional Body self-relations Scale	Cash	2000	r = 0.71to 0.91
3.	Self-esteem Scale	Rosenberg	1965	r=0.95
4.	Narcissistic Personality Inventory NPI-16	Ames, Rose, and Anderson	2006	r=0.72
5.	Brief Histrionic Personality Scale	Ferguson&Negy	2014	test-retest coefficient 0.91

Pilot Study

Before starting the main study, the researcher conducted a pilot study on 30 participants to assess the feasibility of the tools and the time required to answer them. On a Sunday, the researcher administered the tools to 15 male and 15 female students, explaining the study's rationale and providing them the essential instructions on the instruments, as well as ensuring the confidentiality of the data collected.

From the pilot study, it was established that the participants were able to comprehend and respond to all the items in the tools and the approximate time spent taking the test was between 25 and 30 minutes. The participants also reported that they did not experience any boredom as the items in the different tests were not similar. Hence, all the tools were retained for the study proper.

Procedure

The researcher listed out the colleges from the Dakshina Kannada region, that fulfilled the criteria of the sample population, contacted the heads of various institutions and explained to the authorities the rationale and objectives of the study, and sought permission to collect data from students of their institution. Of the many colleges listed, the sample was

collected from colleges that permitted to use their students as research participants. After obtaining permission from the concerned authorities, the researcher prepared a schedule to visit different colleges for data collection and collected the data at different points of time depending on the timings the course was spread out. The research participants have explained the purpose of the study, and written consent was obtained from the participants showing their acceptance to take part in the study. Participants were assured of the confidentiality of the information obtained and that the data would be used only for the research purpose. The data was collected either individually or in groups depending on the availability of the participants. The participants were met at their respective colleges, Separate classrooms were arranged with the help of the faculties of the college when the data were collected in groups, The researcher established rapport with the participants before giving them the questionnaires to answer, once the participants were comfortable, the researcher explained the instructions regarding answering the questionnaire, after confirming that the participants were clear with the instructions, the researcher asked the research participants to proceed to answer the tools, Similar method was adopted at all colleges were the data was collected in groups. And when it was collected individually the researcher adopted the same method but explained the participants one on one. The data collection began in September 2018 and went up to July 2019.

Ethical Issue

Approval was obtained from the doctoral committee of Mangalore University to conduct the research.

Oral consent was obtained from the heads of institutions.

Written consent was obtained from the participants.

Confidentiality of the data has been maintained.

During group administration, privacy was maintained by seating the participants at specific distance to avoid cross-referencing and allowing the individual to take the test in privacy.

The data is used only for research purposes.

Analysis of data

- The obtained data were tested for normality using the Shapiro-Wilk test using SPSS 21.
- As the data did not meet the criteria for normality, Spearman Rank Difference Correlation was used to study the relationship between internet addiction and other dependent Variables.
- Mann Whitney U test was used to study the gender differences in internet addiction.
- Kruskal Wallis test was used to study the differences in internet addiction across educational streams.

Summary and Conclusions

Major findings of the Research

Findings from the Interview schedule

- Airtel and jio Internet services are widely used by participants compared to other internet services.
- Watching YouTube for edutainment, updating social media, and chatting is the main purposes of using the Internet by the majority of participants.
- Internet games are played more frequently by male participants compared to their female participants.
- PUBG and Candy crush are the most frequently played internet games by most participants irrespective of gender.
- Irrespective of the educational stream, less than 1 % of the participants have a severe level of internet addiction.
- Engineering and Management, students show mild to moderate level of internet addiction.
- Majority of the participants irrespective of sex have mild to moderate level of internet addiction.

Findings from Quantitative data

- Kruskal Wallis Test was used to test the hypothesis that there is no difference in Internet addiction across educational streams; the results show that there is a statistically significant difference in internet addiction across educational streams, which is indicated by $X^{2=}$ 23.451 (p=.001). Students pursuing engineering and management degrees have higher levels of internet addiction compared to students pursuing medical and general degree courses. The results support the findings of

Garapati (2020) who reports that engineering students are more severely hooked to the Internet than medical students, with 8% of engineering students and 1% of medical students being severely addicted to the internet. The study's findings also corroborate the findings of Singh (2020), who states that engineering students generally tend to have a high level of Internet addiction.

To understand which stream had a higher level of internet addiction compared to the others pairwise comparison was carried out.

- The results indicated that there is a significant difference in the patterns of internet addiction across educational streams.
- Engineering and Management students scored significantly higher on the dimension of salience indicating that they use internet as a mental escape and feel that life without internet is joyless and boring.
- Engineering and Management students are unable to control their time online and engage in excessive online behavior, as a result of which they as are found to neglect their work.
- Engineering, Management and General Degree students think of being online when not on computer and they feel compelled to be online when they are offline.
- Engineering Students find difficulty in managing time and having control over their online activities.
- Management students neglect their social life due to internet addiction.
- The findings of the study reveal that there is a significant gender difference with regard to overall internet addiction ($z = 3.328$ $p = .001$). The median score for male students is 45, and the median score for female students is 43, which indicates that male students have a significantly higher level of internet addiction when compared to female students.

- In general, men are more likely than women to be more prone to addictions irrespective of Chemical /Behavioural addiction (SAMHSA, 2014). Results of many previous studies have also made it evident that there is a clear-cut gender difference in all sports/fields of addiction with males being more prone to exhibit most addictive behaviours (Minutillo 2016). Less parental monitoring compared to females, and their interest to explore gadgets and applications could be some of the contributing factors to a higher level of internet addiction among males. On the other hand, female adolescents often receive more family supervision than males, which may help prevent them from spending too much time on the Internet (Yu et al., 2013)
- The study contradicts the findings of Sun et al. (2012), who report that females in the US had higher internet addiction than males, and the findings of Nitu (2017) who reports that gender does not affect internet addiction behaviour.
- Gender difference is found in neglect work and neglect social life, in both the patterns male participants show more neglect in these areas compared to female participants.
- Of the 10 areas of the body self-relations scale, two areas that are appearance orientation and overweight preoccupation are positively correlated with internet addiction, while fitness evaluation and body areas satisfaction are negatively correlated with internet addiction.
- Internet addiction and self-esteem are significantly negatively correlated.
- Internet addiction and histrionic and narcissistic traits are significantly positively correlated.

Subsidiary Findings

- Internet addiction and academic performance are significantly negatively correlated.
- Day scholars have a significantly higher level of internet addiction when compared to the hostelites.

Implications of the Study

- The Findings of the present study shows that the pattern of internet addiction is different across the different educational streams. Hence if the pattern of internet addiction across all the prevailing educational streams is studied, suitable interventions can be designed.
- Awareness can be created among the engineering and management students about the impact of internet addiction on their personal life and how it may impact their professional life.
- The findings of the study can be used by educational institutions in understanding the nature of addictions in adolescents and set up centers in colleges for healthy use of the internet.

Limitations

- An unstructured interview of the outliers would have given a better understanding of the phenomena.
- The causal factors could have been studied simultaneously to strengthen the nature of the study.

Recommendations for further research

- Future studies can focus on studying the predictive factors of internet addiction.
- A mixed-method approach can be used while studying Internet addiction.
- A focused group discussion on causal and protective factors of internet addiction can be carried out, that can contribute towards managing internet addiction.

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